

Claims

I claim:

1. A method for receiving data over a broadcast medium, comprising the steps of:

receiving a request for a desired data object, said desired data object being associated with a first-level name;

obtaining a plurality of second-level names associated with said first-level name, said plurality of second-level names being associated with a plurality of low-level data objects constituting a portion of said desired data object;

for each one of said plurality of second-level names, performing the steps of:

obtaining location information associated with said second-level name; and

obtaining data associated with the low-level data object associated with said each one of said plurality of second-level names responsive to said location information.

2. The method of claim 1 wherein said desired data object is a web page.

3. The method of claim 2 wherein said web page comprises a multi-screen web page.

4. The method of claim 1 wherein said desired data object is a word processing file.

5. The method of claim 1 wherein said broadcast medium includes a cable.

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6. The method of claim 5 wherein said cable is fiber optic cable.

7. The method of claim 1 wherein said broadcast medium allows for wireless communication.

8. The method of claim 1 wherein said broadcast medium is a portion of a computer network.

9. The method of claim 1 wherein said first-level name is a uniform resource locator (URL).

10. The method of claim 1 wherein said first-level name is a web page title.

11. The method of claim 1 wherein said first-level name is a text string.

12. The method of claim 11 wherein said text string is associated with an icon.

13. The method of claim 1 wherein said second-level name takes a minimal amount of storage space.

14. The method of claim 1 wherein said second-level name is an integer.

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2 15. The method of claim 1 wherein said second-level name is an index into a table.

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4 16. The method of claim 1 wherein said location information is accessed through a
5 memory containing a data structure.

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7 17. The method of claim 1 wherein said location information is sufficient to locate said
8 data in a data stream.

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10 18. The method of claim 17 wherein said location information comprises an MPEG
11 table.

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13 19. The method of claim 1, including the further step of combining said plurality of low-
14 level data objects.

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16 20. The method of claim 19 wherein the step of combining results in a portion of said
17 desired data object.

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19 21. The method of claim 20, including the further step of presenting said desired data
20 object.

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22 22. A method for receiving data over broadcast media, comprising the steps of:

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1 receiving a request for a desired data object, said desired data object being
2 associated with a first-level name;
3 looking up said first-level name in a First-level Name Table;
4 obtaining a plurality of second-level names associated with said first-level name
5 responsive to the step of looking, and
6 for each one of said plurality of second-level names so obtained, performing the
7 steps of:
8 looking up each said second-level name in a Low-level Data Object Locator
9 Table,
10 obtaining location information associated with said each said second-level
11 name,
12 obtaining data responsive to said location information.

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14 23. The method of claim 22 wherein said desired data object is a web page.
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16 24. The method of claim 22 wherein said broadcast medium includes a cable.
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18 25. The method of claim 22 wherein said first-level name is a web page title.
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20 26. The method of claim 22 wherein said location information is accessed through a
21 memory containing a data structure.
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1 27. The method of claim 22 wherein said location information is sufficient to locate said
2 data in a data stream.

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4 28. The method of claim 22, including the further step of combining said plurality of
5 low-level data objects.

6
7 29. The method of claim 28 wherein the step of combining results in a portion of said
8 desired data object.

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10 30. The method of claim 22, including the further step of presenting said desired data
11 object.

12
13 31. A method for organizing data for transmission in a data stream over broadcast media,
14 comprising the steps of:

15 associating a first-level name with said data;

16 organizing said data into a plurality of data objects;

17 for each one of said plurality of data objects, performing the steps of :

18 associating a second-level name with said each one of said plurality of data
19 objects;

20 associating a data location with said second-level name; and

21 assigning said data object to be broadcast in said data location.
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1 32. The method of claim 31, including the further step of broadcasting said each one of
2 said plurality of data objects in said data location.

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4 33. The method of claim 32, wherein said each one of said plurality of data objects is
5 broadcast as an MPEG section.

6
7 34. The method of claim 32, wherein said each one of said plurality of data objects is
8 formatted for transmission as an MPEG section.

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10 35. The method of claim 31, wherein said data object is formatted for transmission as an
11 UDP packet.

12
13 36. A memory including a data structure including a set of entries, each of said
14 plurality of entries including

15 a textstring associated with a first-level name, said first-level name being
16 associated with a desired data object; and

17 a plurality of integers, each of said plurality of integers being associated
18 with a second-level name, each said second-level name being associated with a low-level
19 data object, said plurality of second-level names composing said data object.

20
21 37. A memory including a data structure including

22 a First-level Name Table; and

1 a data object locator table.

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3 ² SUB A 7
38. The data structure of claim 6, further including a root object locator table.

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5 ⁴ SUB B 7
39. An apparatus having at least one processor and at least one memory coupled to said
6 at least one processor for receiving data over a broadcast medium, said apparatus
7 includes:

8 a first mechanism configured to receive a request for a desired data object, said
9 desired data object being associated with a first-level name;

10 a second mechanism configured to obtain a plurality of second level names
11 associated with said first-level name, said plurality of second-level names being
12 associated with a plurality of low-level data objects constituting a portion of said desired
13 data objects;

14 a third mechanism configured to obtain location information responsive to each on
15 of said plurality of second-level names; and

16 a fourth mechanism configured to obtain data associated with the data object
17 associated with said each one of said plurality of second-level names responsive to said
18 location information.

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20 40. The apparatus of claim 39 wherein said desired data object is a web page.

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22 41. The apparatus of claim 39 wherein said broadcast medium includes a cable.

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2 42. The apparatus of claim 39 wherein said first-level name is a web page title.

3

4 43. The apparatus of claim 39 wherein said location information is accessed through a
5 memory containing a data structure.

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7 44. The apparatus of claim 39 wherein said location information is sufficient to locate
8 said data in a data stream.

9

10 45. The apparatus of claim 39, further including a combine mechanism configured to
11 combine said plurality of low-level data objects.

12

13 46. The apparatus of claim 45 wherein said combine mechanism is configured so that the
14 result is a portion of said desired data object.

15

16 47. The apparatus of claim 39, further including a presentation mechanism configured to
17 present said desired data object.

18

19 48. An apparatus having at least one processor and at least one memory coupled to said
20 at least one processor for receiving data over broadcast media, said apparatus includes:

21 a reception mechanism configured to receive a request for a desired data object,

22 said desired data object being associated with a first-level name;

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- 1 a lookup mechanism configured to look up said first-level name in a First-level
- 2 Name Table;
- 3 an obtain mechanism configured to obtain a plurality of second-level names
- 4 associated with said first-level name responsive to said lookup mechanism;
- 5 a second lookup mechanism configured to lookup each of said plurality of second-
- 6 level names;
- 7 a second obtain mechanism configured to obtain location information associated
- 8 with said each said second-level name;
- 9 a third obtain mechanism configured to obtain data responsive to said location
- 10 information.
- 11
- 12 49. An apparatus having at least one processor and at least one memory coupled to said
- 13 at least one processor for organizing data for transmission in a data stream over broadcast
- 14 media, said apparatus includes:
- 15 a first association mechanism configured to associate a first-level name with said
- 16 data;
- 17 an organization mechanism configured to associate a second-level name with each
- 18 one of said plurality of data objects;
- 19 an second association mechanism configured to associate a second-level name
- 20 with each one of said plurality of data objects;
- 21 a third association mechanism configured to associate a data location with said
- 22 second-level name; and

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1 an assign mechanism configured to assign said data object to be broadcast in said
2 data location.

3
4 50. A computer program product including:

5 a computer usable storage medium having computer readable code embodied
6 therein for causing a computer to receive data over a broadcast medium, said computer
7 readable code includes:

8 computer readable program code configured to cause said computer to effect a
9 first mechanism configured to receive a request for a desired data object, said desired
10 data object being associated with a first-level name;

11 computer readable program code configured to cause said computer to effect a
12 second mechanism configured to obtain a plurality of second level names associated with
13 said first-level name, said plurality of second-level names being associated with a
14 plurality of low-level data objects constituting a portion of said desired data objects;

15 computer readable program code configured to cause said computer to effect a
16 third mechanism configured to obtain location information responsive to each on of said
17 plurality of second-level names; and

18 computer readable program code configured to cause said computer to effect a
19 fourth mechanism configured to obtain data associated with the data object associated
20 with said each one of said plurality of second-level names responsive to said location
21 information.

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1 51. A computer program product including:

2 a computer usable storage medium having computer readable code embodied
3 therein for causing a computer to receive data over broadcast media, said computer
4 readable code includes:

5 computer readable program code configured to cause said computer to effect a
6 reception mechanism configured to receive a request for a desired data object, said
7 desired data object being associated with a first-level name;

8 computer readable program code configured to cause said computer to effect a
9 lookup mechanism configured to look up said first-level name in a First-level Name
10 Table;

11 computer readable program code configured to cause said computer to effect an
12 obtain mechanism configured to obtain a plurality of second-level names associated with
13 said first-level name responsive to said lookup mechanism;

14 computer readable program code configured to cause said computer to effect a
15 second lookup mechanism configured to lookup each of said plurality of second-level
16 names;

17 computer readable program code configured to cause said computer to effect a
18 second obtain mechanism configured to obtain location information associated with said
19 each said second-level name;

20 computer readable program code configured to cause said computer to effect a
21 third obtain mechanism configured to obtain data responsive to said location information.

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1 52. A computer program product including:

2 a computer usable storage medium having computer readable code embodied
3 therein for causing a computer to organize data for transmission in a data stream over
4 broadcast media, said apparatus includes:

5 computer readable program code configured to cause said computer to effect a
6 first association mechanism configured to associate a first-level name with said data;

7 computer readable program code configured to cause said computer to effect an
8 organization mechanism configured to associate a second-level name with each one of
9 said plurality of data objects;

10 computer readable program code configured to cause said computer to effect an
11 second association mechanism configured to associate a second-level name with each
12 one of said plurality of data objects;

13 computer readable program code configured to cause said computer to effect a
14 third association mechanism configured to associate a data location with said second-
15 level name; and

16 computer readable program code configured to cause said computer to effect an
17 assign mechanism configured to assign said data object to be broadcast in said data
18 location.

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20 53. A computer program product including:

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1 a computer data signal embodied in a carrier wave having computer readable code
2 embodied therein for causing a computer to receive data over a broadcast medium, said
3 computer readable code includes:

4 computer readable program code configured to cause said computer to effect a
5 first mechanism configured to receive a request for a desired data object, said desired
6 data object being associated with a first-level name;

7 computer readable program code configured to cause said computer to effect a
8 second mechanism configured to obtain a plurality of second level names associated with
9 said first-level name, said plurality of second-level names being associated with a
10 plurality of low-level data objects constituting a portion of said desired data objects;

11 computer readable program code configured to cause said computer to effect a
12 third mechanism configured to obtain location information responsive to each on of said
13 plurality of second-level names; and

14 computer readable program code configured to cause said computer to effect a
15 fourth mechanism configured to obtain data associated with the data object associated
16 with said each one of said plurality of second-level names responsive to said location
17 information.

18
19 54. A computer program product including:

20 a computer data signal embodied in a carrier wave having computer readable code
21 embodied therein for causing a computer to receive data over broadcast media, said
22 computer readable code includes:

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1 computer readable program code configured to cause said computer to effect a
2 reception mechanism configured to receive a request for a desired data object, said
3 desired data object being associated with a first-level name;

4 computer readable program code configured to cause said computer to effect a
5 lookup mechanism configured to look up said first-level name in a First-level Name
6 Table;

7 computer readable program code configured to cause said computer to effect an
8 obtain mechanism configured to obtain a plurality of second-level names associated with
9 said first-level name responsive to said lookup mechanism;

10 computer readable program code configured to cause said computer to effect a
11 second lookup mechanism configured to lookup each of said plurality of second-level
12 names;

13 computer readable program code configured to cause said computer to effect a
14 second obtain mechanism configured to obtain location information associated with said
15 each said second-level name;

16 computer readable program code configured to cause said computer to effect a
17 third obtain mechanism configured to obtain data responsive to said location information.

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19 55. A computer program product including:

20 a computer data signal embodied in a carrier wave having computer readable code
21 embodied therein for causing a computer to organize data for transmission in a data
22 stream over broadcast media, said apparatus includes:

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- 1 computer readable program code configured to cause said computer to effect a
- 2 first association mechanism configured to associate a first-level name with said data;
- 3 computer readable program code configured to cause said computer to effect an
- 4 organization mechanism configured to associate a second-level name with each one of
- 5 said plurality of data objects;
- 6 computer readable program code configured to cause said computer to effect an
- 7 second association mechanism configured to associate a second-level name with each
- 8 one of said plurality of data objects;
- 9 computer readable program code configured to cause said computer to effect a
- 10 third association mechanism configured to associate a data location with said second-
- 11 level name; and
- 12 computer readable program code configured to cause said computer to effect an
- 13 assign mechanism configured to assign said data object to be broadcast in said data
- 14 location.